UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

3180-00002

December 30, 1994

Juris Sinats
Environmental Restoration Branch, Code 181
EFA, West
Naval Facilities Engineering Command
900 Commodore Drive
San Bruno, CA 94066-0720

Re: Engineering Evaluation/Cost Analysis, IR-18, Former Base Exchange Gasoline Station, September 9, 1994

Dear Mr. Sinats:

The above referenced document has been reviewed and comments are enclosed. The document needs considerable revision and the purpose and scope of the removal needs to be reconsidered. There are a number of critical areas in this plan that need to be better addressed. These include the need to address the impact to groundwater in setting cleanup levels, the insufficient justification for removing the backfill, inadequate consideration of treatment remedies for the backfill (which is more than half of the soil to be removed), and not enough analysis or data to determine if metals might impact the treatment options. This last concern is essential to being able to choose between the four alternatives.

I also believe that there is no point to pursuing this removal unless it will result in the remedy of all soil contamination associated with the gas station operations and that it considers all relevant pathways that may be impacted by the soil contamination. The magnitude of contamination at the site is not sufficient to justify an action that will not be the final remedy for soils at the site.

This type of removal (an EE/CA or other large scale action) should be scoped with the regulators in advance of submitting the document. Such scoping will save considerable effort to all parties involved.

If you have any questions, please call me at 415/744-2388.

Sincerely,

Tom Huetteman
Remedial Project Manager

Enclosures

cc: Dick Logar, MINSY
Bob Pender, MINSY
Marv Hillstrom, EFA West
Chip Gribble, DTSC
Gina Kathuria, RWQCB

Comments on the EE/CA for IR-18

1. Section 1.2: Revise accordingly based on the comments to the remainder of the document.

2. Maps: All maps must include a scale (except fig. 2.1) and north arrow. Include a map of the entire shipyard to show the location of IR-18 on the shipyard.

3. Section 2.4: Was the gradient determined just based on two wells? If so it is not accurate. The accuracy of groundwater flow direction and gradient needs further evaluation based on current data. Please indicate whether any of the information about groundwater hydrology and hydraulic conductivity has been verified by PRC data. Also, please distinguish fill that is man-made fill from natural depositions.

4. Page 7, first paragraph: This discussion is inadequate. EPA guidance[1] on EE/CAs call for a streamlined risk evaluation. This evaluation should be performed in consultation with a toxicologist and should be performed consistent with the guidance. The discussion should appear after the presentation of the site data. Exposure via inhalation and windborne particles is not a concern because the site is paved.

5. Section 2.6: The general statement that there is no connection between the marsh area and the human food chain should be deleted. Waterfowl can be expected to use marshlands at Mare Island; however, this would not be a concern relative to subsurface contamination at IR-18.

6. Figure 3-1: This figure does not show the "Tank Removal Sample Locations." Also, what is the dashed line on this figure? It is not the same as the fence line on previous figures.

7. The analysis of the data should consider together both the IT and PRC data for evaluating the nature and extent of contamination since they are both part of the remedial investigation (RI). The other data is less useful for determining nature and extent because it was not collected as part of the RI.

8. Figure 3-5: This figure should look at both IT and PRC data. The data points for the A-A cross section need to be labeled and an indication of the approximate top of the water table should be added. Where is GP-28? Also, the title is inaccurate; these are not just concentrations at the groundwater surface.

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[1] *Guidance on Conducting Non-Time-Critical Removal Actions Under CERCLA*, EPA540-R-93-057, August 1993.

9. Figure 3-6: This figure is confusing because the orientation has been changed from the other figures. Please correct. What data points are represented here and why aren't all the PRC and IT data included. The figure should also include the location of the former tanks.

10. Table 4-1 and 4-2: Where is TPH-diesel? Which are the ERM-West data and whose data is the periodic groundwater monitoring data? The groundwater and soil tables should each contain four columns: Wahler & Assoc data, ERM-West data, IT data and PRC data. The blanks in the table are suppose to mean no data was taken. How are non detects presented? For example, toluene was certainly part of the follow-up RI data. Distinguish between NA and ND in the table.

11. Section 4.2: The limits in the NCP are for removals that are "fund-financed, i.e, paid for by the superfund. Because the Navy does not use fund money they are not bound by these limits. They are however a guide.

12. Page 18, last paragraph: The authority to waive administrative requirements comes from the NCP and CERCLA not from the IR manual.

13. Page 19, 2nd paragraph: Federal drinking water regulations define a non-potable aquifer as having a TDS of greater than 10,000 mg/l or a yield less than 150 gals per day. This is an ARAR for groundwater.

14. Page 19, last paragraph: The applicability of MCLs to groundwater at Mare Island must be made based on a presentation of data on TDS, aquifer yield and stratigraphy. This document does not provide the data and therefore can not support any assertion regarding the inapplicability of MCLs to groundwater at IR-18.

15. Table 4-3: I don't believe the RCRA limits in the last column should apply to this site because it isn't or would never have been a RCRA regulated unit. If these limits do apply, the appropriate limit for the chemicals other than lead is background. In regards to TPH, the underground storage tank program should be referenced. In this program there are specific criteria that should be reviewed as "To Be Considered" (TBC) levels. For example, the LUFT manual and the triregional guidance from the California Water Board present allowable levels for TPH and BETX in soil.

16. Page 21 - 23: There are several problems with the use of the EPA PRGs in the document. The comments are listed below.

The reference to the PRGs is an outdated reference. The current version is August 1, 1994. This version has been

previously supplied to MINS.

The discussion of PRGs under an ARAR discussion is inappropriate. The cleanup levels for this action are to consider two factors. The first is risk and the second is ARARs. Cleanup levels are usually based on the lowest value derived from ARARs or risk evaluations. Using PRGs as cleanup levels should be part of a risk evaluation which is lacking from this document (see comment 4).

When EPA describes PRGs as appropriate for "initial cleanup goals" this means that the PRGs can be used as a starting point for deriving site specific cleanup goals. It has nothing to do with whether the cleanup is an "initial cleanup."

The State of California has recognized the application of EPA's PRGs for certain purposes and in general the PRG levels are consistent with State guidance with a few exceptions. One such exception is lead. Please consult an October 28, 1994 memorandum from DTSC toxicologists regarding the use of EPA's PRGs at military facilities.

The cleanup level proposed here does not take into account the impact of soil contamination on groundwater.

EPA does not support the use of the PRGs to derive a TPH cleanup level. Cleanup levels that are derived from site risks should be based on the individual chemical components detected at the site and their combined risks (i.e., cleanup levels for benzene, toluene, etc.). Is there a reference for the procedure outlined on page 23?

A more specific reference should be given for the ATSDR reference.

17. Page 24, 2nd paragraph: While the conclusion at the bottom of the paragraph is not an unreasonable assumption, because groundwater hydrogeology has not to date been properly evaluated we can not say conclusively that this statement is true. For the purpose of this removal, you can choose to ignore this pathway recognizing that it needs further evaluation throughout the base.

18. Section 4.3.2: If the removal does not involve locations covered by a particular ARAR, then those regulations are not ARARs. The Endangered Species Act is an ARAR if the action might potentially impact endangered species. This action does not. A similar point can be made about historic buildings. As a general rule, you should only list ARAR that would impose a requirement on one or more of the actions being considered in section 5.

19. Section 4.3.3: A number of the ARARs listed here are too broad. The purpose here is to specifically define which ARARs apply to the actions proposed. For example, not all of RCRA is an ARAR. NEPA is also not an ARAR. As an aside, in the action memorandum that selects which removal action to take, only the specific ARAR requirements for that action will need to be spelled out.

20. Section 4.4.1: In regards to references to "RI validated samples" does this mean that the on-site PRC laboratory data was or was not included in the analyses of data presented in the document? If the data is treated differently there needs to be clearer reference as to which data is being referred to throughout the document.

21. Section 4.5, page 28: The justification here is weak. Only one sample exceeds the cleanup criteria established. We should generally never make cleanup decisions based on a single sample above an action level. This point aside, the cleanup level selected needs to be reevaluated and the data analyzed in light of a new number if necessary. If the level of 200 ppm for TPH is used, I believe that the data does not support any action at this point.

22. Section 4.6.1: The specific objectives should be stated in terms of the specific concerns that will be addressed (e.g., future exposure potential to contaminated soil, impact to groundwater, etc.) and the type of action to be taken (e.g., treatment, excavation, or containment). One of the goals of every removal that is part of a long term remedy is consistency with the final remedy. That is the point of the CERCLA reference from 104(b). Objective statements such as comply with the NCP are unnecessary. See the EPA guidance mentioned above for more information.

23. Section 4.6.2: The document fails to present any data that justifies the need to remove the backfill, especially since more than half of all the soil to be excavated is backfill. Is it the intention of the Navy to remove all sandblast grit used anywhere on the island as backfill? If not, what is the rationale for removing it here and not everywhere else? See also comment 21 with regards to volume estimates based on TPH.

24. Figure 4-1: The orientation of the cross section causes confusion.

25. Section 5: Only one action alternative is presented for the backfill, which is offsite disposal. Why is there not more consideration about how to address this concern? What off-site recycling facility will be used and are you sure they will take this material?

26. Section 5.2.2: This remedy assumes that there is no disposal cost for the treated soil. The document needs to discuss this point and evaluate the potential for metals concentrations in soil that might impact disposal options. In order for the removal to be cost effective, on-site disposal, preferably at IR-18 must be feasible.

27. Section 5.2.2: Please provide more detail on the specific method to be employed for bioremediation. Will the soil be covered, how will it be aerated, and will any amendments be added?

28. Section 5.2.2.3: Is the reference to the successful history of the soil treatment facility (STF) really a reference to the success of bioremediation? An STF is not limited to specific technologies. Since this options is tied so directly to the STF, the proposal for the STF should be put forward along with this document.

29. Section 5.2.3.3: Where is the final disposition of the soil that undergoes thermal treatment? If you don't have enough data to say that this option will even be feasible, it should not be proposed without the additional data. This document is suppose to perform the function of a feasibility study.

30. Section 5.2.4.2: Would the monitoring described here not also be required for the other actions since this action is not a final action?

31. Section 6.0, 2nd paragraph: If data from the WET test is needed, this must be collected up front because it is necessary for selecting the alternative. An EE/CA must present all the data necessary to make a selection of an alternative. If certain critical data is missing, it must be collected before the EE/CA is prepared.

32. Section 7: The rationale for selecting alternative 2 is weak. Liability concerns from transport should not be considered significant given the low concentration of contamination from a transport perspective. Alternative 2 has some significant uncertainties because the STF is not in place and a plan for it has not been put forward. Also, the final disposal of treated soil has not been adequately evaluated. A factor that might be in favor of the STF is whether it will be more cost effective when operational because it will also be used to treat soil from other sites.

33. The last sentence says that the intent is to prevent the spread of contamination to groundwater, yet the cleanup levels were not derived with this objective in mind.

24. Appendix A: Nondetect data needs to be presented with the detection limit so that it can be determined on a sample-by-sample basis if the detection limit was low enough to rule out any concern. Validated data must also include the appropriate data qualifiers and then the impact of the data qualifiers needs to be considered in evaluating the data. All CLP data needs to be distinguished from on-site laboratory data, and both data sets must be presented. The appendix must clearly indenfiy the number of CLP data points versus the number of on-site lab data points. Also, where is the diesel data on pages A-12 to A-14?